

REMARKS

Status of the Claims

Claims 8-9, 12-13, 19-32, 34-40, and 42-45 are pending in this application.

Claims 8-9, 12-13, 19-32, 34-40, and 42-45 are rejected.

File History of the Present Application

Applicant wishes to put into the record their dissatisfaction with the unduly burdensome examination of the present application. This is the seventh Office Action to which Applicant has had to respond. Out of the seven Office Actions, many have included claims considered by the Examiner to be either allowed or objected to and would be allowed if made in independent form. In good faith response, Applicant has repeatedly amended the claims into condition for allowance; however, the Examiner continues to repeatedly reject allowed claims based on new grounds. MPEP 707.07(g) specifies that piecemeal examination of an application should be avoided as much as possible. "The Examiner ordinarily should reject each claim on all valid grounds available, avoiding, however, undue multiplication of references." *Id.* Applicant submits that in the present case piecemeal examination has not been avoided. The seven Office Actions have asserted several different types of references against the present application which Applicant maintains has resulted in an unduly burdensome piecemeal examination of the present application.

MPEP 904.03 addresses the search that is conducted by the Examiner. More specifically, the MPEP requires that the Examiner search beyond the scope of the broadest claims. "It is normally not enough that references be selected to meet only the terms of the claims alone, especially if only broad claims are presented; but the search

should, insofar as possible, also cover all subject which the Examiner reasonably anticipates might be incorporated into applicant's amendment." See *MPEP 904.03*. Overall MPEP 904.03 requires the Examiner to not multiply the number of rejections given but to cite the best possible references in order to avoid costly examination. The prosecution of the present application has been unduly burdensome because on several occasions there were claims considered allowable by the Examiner, Applicant tried to take those allowed claims, only to be once again rejected.

Applicant also submits that the most recent claim amendments were not even considered by the Examiner in the arguments made in the Office Action. The Examiner dismissed Applicant's most recent claim amendments maintaining that they are not supported by the specification and maintained the same rejection as if the claim amendments were never entered. Even if, as Applicant has argued, there is support in the specification for the claim amendments made in the last response, the Examiner has failed to fully search these limitations. However, Applicant maintains that the Examiner's previous search should have included these limitations. As such, Applicant respectfully requests relief from the unduly burdensome prosecution that has taken place in this case, and in light of the remarks below, allowance is requested.

Rejection of Claims 8, 9, 19-22, and 43 Under 35 U.S.C. § 112

Claims 8, 9, 19-22, and 43 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Applicant respectfully traverses the 35 U.S.C. § 112 rejection of claims 8, 9, 19-22, and 43. The Office Action rejected these claims because they allegedly fail to comply with the written description requirement. More specifically, the Office Action indicated that there is no support in the specification for the limitation that "the

supervisor circuit forcing the first and second output signals to change to a diagnostics range in response to an electrical failure with the sensor element or the output circuits and combinations thereof." In the last Response to Office Action, Applicant had made only two changes to the limitation in question, the word "problem" was deleted and the words "electrical failure" added, and the words "and combinations thereof" were added. Applicant wishes to point out paragraph [0013] of the specification which states:

A supervisor circuit 30 can be any type of circuit that is able to monitor the operating conditions of the circuits within the system 10, and many types of circuits would be applicable for this purpose, as would be appreciated by those skilled in the art.

Clearly, the supervisor circuit 30 shown in Fig. 1 can monitor the circuits within the system. Additionally, Fig. 1 shows arrows between the supervisor circuit and the sensor element, shared circuits, output circuits, and peripheral circuits. Furthermore, paragraph [0014] of the specification states:

If the circuit component within the shared circuits 26 or peripheral shared circuits 28 fails, then the supervisor circuit 30 will provide an output to the controller 18 through the output circuits 14 and 16 to indicate a problem. For example, a failure of any shared circuit 26 could result in a diagnostic output signal of the two output signals between 0 and 0.25 volts or 4.75 and 5 volts. (emphasis added)

The above passage indicates that an example of the type of problem can be an electrical problem resulting in a change in voltage. Clearly, the above passage of the specification supports claims 8, 9, 19-22, and 43 because paragraphs [0013-0014] of the specification clearly provides support for the supervisor circuit monitoring the sensor element and the output circuits and forcing the first or second output signals to change to a diagnostics range in response to a problem with the sensor element or the output circuits, or combination thereof. This invention is directed to an electrical circuit where an electrical failure is a type of problem. Applicant has, in its last amendment, amended

the claims to be more specific as to the type of a problem that can occur, and specify that such a problem is an electrical failure.

As outlined above, Applicant submits that rejected claims 8, 9, 19-22, and 43 are fully supported by the specification and drawings of the application. Removal of the rejection is respectfully requested.

Rejection of Claims 8-9, 12-13, and 19-45 Under 35 U.S.C. § 102(e)

Claims 8-9, 12-13, and 19-45 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,693,419 to Stauth et al. (hereafter "Stauth '419").

The Applicant respectfully traverses the 35 U.S.C. § 102(e) rejection of claims 8-9, 12-13, and 19-45. Claims 33 and 41 have been cancelled, without prejudice. The Applicant respectfully requests reconsideration of the rejections based on the following remarks.

The law is clear that anticipation requires that a single prior art reference disclose each and every limitation of the claim sought to be rejected. The law is also clear that a claim in dependent form shall be construed to incorporate all the limitations of the claim to which it refers.

Rejected Claims 8, 19-22, and 43 are all independent claims which have been amended to include the limitation of the supervisor circuit changing the signals to a diagnostics range in response to an electrical failure in one or more of the sensor element or output circuits, and combinations thereof. Independent claim 9 has been amended to include the limitation of the supervisor circuit changing signals to a diagnostics range in response to an electrical failure and one or more of the sensor element, output circuits, or shared circuits, and combinations thereof. Applicant maintains that Stauth '419 does not disclose these elements.

Stauth '419 is directed to a circuit for maintaining and varying a signal in response to variations in field strength. There is nothing that discloses responses due to electrical failure in the sensor elements or the output circuits as recited in independent claims 8, 19-22, and 43. Furthermore, there is nothing that discloses the circuitry responding as a result to electrical failure in the shared circuitry as recited in independent claim 9. Figure 1 of Stauth '419 shows a circuit that has the disadvantage of the DIFF signal value occurring between times t4 and t5 is not detected, thereby causing an output transition of the POSCOMP signal to be skipped in a passing magnetic article to go undetected. *See Col. 2, Lines 39-42.* Stauth '419 addresses the problem of missing the passing of a magnetic article when the signal is not maintained. This is a problem that is addressed by the later figures in Stauth '419. There is nothing discussed in the background of the invention that discloses electrical failures of the sensor, output circuits, or shared circuits. The DIFF signal does not change due to an electrical failure but instead changes as a result of the magnetic articles passing the sensor element.

Stauth '419 discloses circuits that utilize a tracking signal to make adjustments to the DIFF signal in order to solve the problem of missing the passing of a magnetic article when the signal is not maintained. *See Col. 10, Lines 53-66.* Since Stauth '419 does not disclose a supervisor circuit that changes the first and second output signals to a diagnostics range in response to an electrical failure with the sensor element or the output circuits or combinations thereof, Applicant submits that the rejection of claims 8, 19-22, and 43 should be removed. Additionally, Stauth '419 does not disclose a supervisor circuit that changes the first and second output signals to a diagnostics range in response to an electrical failure with the sensor element, output circuits, shared circuits, or combinations thereof as set forth in rejected claim 9. Furthermore, rejected

claims 12-13, 23-42, and 44-45 depend either directly or indirectly from the aforementioned independent claims. The rejection of these dependent claims should also be removed.

In further regard to Stauth '419, Applicant also argues that the alleged supervisor circuit (58) is only acting in response to a variation with the signal DIFF generated from the exclusive-OR gate (74). The OR gate (74) is comparing the COMPOUT signal with the POSCOMP signal and generates a HOLD input signal to the counter (78) of the circuit (58); thus, the circuit (58) is not reacting in response to an output from the sensor element, or the output circuits, but instead is acting in response to the POSCOMP and COMPOUT signals which are derived from upstream circuitry. The upstream circuitry includes outputs from the circuit (58) as well as the sensor element (62) and the alleged first and second outputs (64,68) but does not react to these components individually. Stauth '419 does not disclose a supervisor circuit that reacts in response to signals from the sensor element, the output circuits, or combination thereof as set forth in claims 8, 19-22, and 43. Additionally, there does not appear to be any evidence that the circuit (58) of Stauth '419 is reacting in response to signals from the sensor element (62), alleged shared circuits (60), or alleged first and second output circuits (64,68), or combinations thereof as set forth in rejected claim 9. For this reason alone Applicant does not believe that rejected claims 8, 9, 19-22, and 43 are anticipated by Stauth '419. Furthermore, rejected dependent claims 12-13, 23-42, and 44-45 which depend either directly or indirectly upon the rejected independent claims, are also allowable by virtue of their dependency.

Applicant also maintains that Stauth '419 cannot be used to render the claimed invention obvious since the alleged supervisor circuit (58) would not function if modified to react to electrical failures. The circuitry presented in Stauth '419 utilizes comparisons

between a voltage threshold signal and voltage tracking signal to the DIFF signal generated by the output sensor. The response to the comparison of these three signals, POSCOMP and COMPOUT signals are generated and ultimately a HOLD signal is transmitted from the OR gate (74) to the counter (78). *See Stauth '419 at Fig. 3; Col. 5, Lines 6-14.* The POSCOMP and COMPOUT signals are used to make adjustments to the DIFF signal. *See Col. 10, Lines 53-66.* If an electrical failure were to occur in the sensor element, alleged shared circuitry (60), or alleged output (64,68) the stated purpose of Stauth '419 making adjustments to the DIFF signal, would not be possible. Furthermore, there is nothing in Stauth '419 that would teach or render obvious a supervisor circuit that operates in response to electrical failures in the sensor element, output circuits, or combinations thereof as set forth in rejected claims 8, 19-22, and 43. Additionally, there is nothing in Stauth '419 that would teach or suggest a supervisor circuit that reacts to electrical failures in the sensor element (62), first and second output circuits (64,68), shared circuits (60), or combinations thereof as set forth in rejected claim 9. As stated above, Stauth '419 reacts to the signals POSCOMP and COMPOUT which are evaluated by the OR gate (74) and does not react to the upstream circuitry. Modifying Stauth '419 to achieve such a purpose would not be obvious. For all the above reasons, Applicant submits that rejected claims 8-9, 12-13, and 19-45 would further not be rendered obvious by Stauth '419.

CONCLUSION


It is respectfully submitted that in view of the above amendments and remarks the claims 8-9, 12-13, 19-32, 34-40, and 42-45, are patentably distinguishable because the cited patents, whether taken alone or in combination, do not teach, suggest or render obvious the present invention. Therefore, Applicant submits that the pending claims are properly allowable, which allowance is respectfully requested.

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 364-4300 if any unresolved matters remain.

Respectfully submitted,

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